

**WHAT IS CLAIMED IS:**

1. A method of interleaving bits in a first sequence, comprising the steps of:  
storing a set of offset values in at least one table;  
applying in order each of the set of offset values to identify an adjacent bit pair in the first sequence of the bits for a new interleaved sequence of the bits; and  
incrementing each of the set of offset values until an upper limit is reached to further identify additional adjacent bit pairs in the first sequence of the bits for the new interleaved sequence of the bits.
2. The method of claim 1, wherein odd numbered bits of the new interleaved sequence comprise odd numbered bits of the first sequence and even numbered bits of the new interleaved sequence comprise even numbered bits of the first sequence.
3. The method of claim 1, wherein the first sequence comprises 228 bits.
4. The method of claim 1, wherein, for each bit pair, a first bit of the pair is assigned to a first interleaved sequence of a first interleaved burst and a second bit of the pair is assigned to a second interleaved sequence of a second interleaved burst and the new interleaved sequence of the bits comprises the first and second interleaved bursts.
5. The method of claim 4, wherein the new interleaved sequence of the bits comprises four bursts including two even numbered interleaved bursts and two odd numbered interleaved bursts and the bit pairs.
6. The method of claim 5, wherein a first even numbered burst and a first odd numbered burst comprise even numbered bits of the first sequence and a second even numbered burst and a second odd numbered burst comprise odd numbered bits of the first sequence.
7. The method of claim 1, wherein the upper limit is a total number of the bits in the first sequence and each of the set of offset values is repeatedly incremented by a fixed increment until the upper is reached.

8. The method of claim 7, wherein the fixed value is 38 and the first sequence is 228 bits.
9. The method of claim 1, wherein storing the set of offset values in at least one table comprises storing a first set of offset values and a second set of offset values.
10. The method of claim 9, wherein the first set of offset values identifies bit pairs for even numbered bursts and the second set of offset values identifies bit pairs for odd numbered bursts for the new interleaved sequence of the bits.
11. The method of claim 9, wherein the first set of offset values comprises {0, 18, 8, 28, 4, 22, 12, 34, 16, 36} and the second set of offset values comprises {0, 22, 4, 26, 6, 30, 12, 34, 10, 16}.
12. The method of claim 9, wherein the first set of offset values are stored in a first table and the second set of offset values are stored in a second table.
13. The method of claim 12, wherein the first table and the second table each comprise 10 or fewer offset values.
14. An apparatus for interleaving bits in a first sequence, comprising:
  - a memory for storing a set of offset values in at least one table; and
  - a processor for applying in order each of the set of offset values to identify an adjacent bit pair in the first sequence of the bits for a new interleaved sequence of the bits and incrementing each of the set of offset values until an upper limit is reached to further identify additional adjacent bit pairs in the first sequence of the bits for the new interleaved sequence of the bits.
15. The apparatus of claim 14, wherein odd numbered bits of the new interleaved sequence comprise odd numbered bits of the first sequence and even numbered bits of the new interleaved sequence comprise even numbered bits of the first sequence.
16. The apparatus of claim 14, wherein the first sequence comprises 228 bits.

17. The apparatus of claim 14, wherein, for each bit pair, a first bit of the pair is assigned to a first interleaved sequence of a first interleaved burst and a second bit of the pair is assigned to a second interleaved sequence of a second interleaved burst and the new interleaved sequence of the bits comprises the first and second interleaved bursts.

18. The apparatus of claim 17, wherein the new interleaved sequence of the bits comprises four bursts including two even numbered interleaved bursts and two odd numbered interleaved bursts and the bit pairs.

19. The apparatus of claim 18, wherein a first even numbered burst and a first odd numbered burst comprise even numbered bits of the first sequence and a second even numbered burst and a second odd numbered burst comprise odd numbered bits of the first sequence.

20. The apparatus of claim 14, wherein the upper limit is a total number of the bits in the first sequence and each of the set of offset values is repeatedly incremented by a fixed increment until the upper is reached.

21. The apparatus of claim 20, wherein the fixed value is 38 and the first sequence is 228 bits.

22. The apparatus of claim 14, wherein storing the set of offset values in at least one table comprises storing a first set of offset values and a second set of offset values.

23. The apparatus of claim 22, wherein the first set of offset values identifies bit pairs for even numbered bursts and the second set of offset values identifies bit pairs for odd numbered bursts for the new interleaved sequence of the bits.

24. The apparatus of claim 22, wherein the first set of offset values comprises {0, 18, 8, 28, 4, 22, 12, 34, 16, 36} and the second set of offset values comprises {0, 22, 4, 26, 6, 30, 12, 34, 10, 16}.

25. The apparatus of claim 22, wherein the first set of offset values are stored in a first table and the second set of offset values are stored in a second table.

26. The apparatus of claim 25, wherein the first table and the second table each comprise 10 or fewer offset values.

27. An apparatus for interleaving bits in a first sequence, comprising:  
means for storing a set of offset values in at least one table; and  
means for applying in order each of the set of offset values to identify an adjacent bit pair in the first sequence of the bits for a new interleaved sequence of the bits and incrementing each of the set of offset values until an upper limit is reached to further identify additional adjacent bit pairs in the first sequence of the bits for the new interleaved sequence of the bits.